

Firms specific factors and the growth of insurance firms in Nigeria

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ABSTRACT

This study examined firms' specific factors and the growth of insurance firms in Nigeria from 2011-2020. It used gross claim payment, insurance premium ratio and Altman Z-scores as the independent variables proxied by returned on equity (ROE). The study obtained secondary data from the twenty-six insurance firms listed on Nigeria Stock Exchange for the period under consideration. Using STATA 13 to analyzed the data, the study concludes that only gross claim payment affects the growth of insurance firms in Nigeria for the period under consideration. The study recommend that insurance firms should improve on their claim management in order to enhance their growth. It is a panel data.

Keywords: insurance firms; insurance industry; insurance penetration

1. BACKGROUND TO THE STUDY

The insurance industry in Nigeria is faced with numerous challenges that may affect the growth of the industry, these challenges ranges from the attitudes of the regulators and management of the firms to public perception which is posing a threat to the firms in the industry. To affirm the above position, scholars like Momudu, Ezirim & Olaletan (2015) observed that the insurance industry in Nigeria is struggling gain public acceptance and hence, increase the penetration.

To increase insurance penetration in Nigeria, there is a need for the stakeholders in the industry to ensure an effective and efficient claim management, clients that experience damages should be paid claims as at when due and in the right amount. This will help to correct the perception the public have on the non-challan attitude of insurers in the payment of claims.

To achieve the above point, premium must be collected at the right time and be effectively manage as well, insurance companies develop strategies or products that will increase the public patronage. This will increase premium payment as well as increase the penetration rate from the abysmal less than 1% to a higher percentage as asserted by scholars like Aghoghoibia (2016). This study therefore examined the contribution of firm specific factors to the growth of the insurance industry in Nigeria using penetration ratio, gross claim and Altman Z-Score as the independent variables. The specific objectives are stated as thus;

1. To examine the effect of penetration ratio on ROE of insurance firms in Nigeria.

2. To determine the effect of gross claim on the ROE of insurance firms in Nigeria.
3. To ascertain the effect of Altman Z-Score on ROE of insurance firms in Nigeria.

Research hypothesis

The hypotheses for this study are stated in null form, they are as follow:

H_{01} : Penetration ratio does not affect ROE of insurance firms in Nigeria.

H_{02} : Gross claim does not affect the ROE of insurance firms in Nigeria.

H_{03} : Altman Z-score does not affect the ROE insurance firms in Nigeria.

Effect of altman z-score on ROE

Altman Z-score is a way of assessing the likelihood of a firm or group of firms to be bankrupt, to do this, the profitability, leverage, solvency, activity ratio as well as the liquidity of the firms must be taking into consideration. The ratio of Altman Z-score ranges from zero to three (i.e 0 to 3), a close to 0 Altman Z-score is an indication that the company is about to experience bankruptcy while a score close to 3 shows that the firm is financially strong. Scholars that used Altman Z-scores to determine the financial well-being of firms include; Foo and Pathak (2019), Almamy, Aston and Ngwa (2016) and Aziz and Dar (2006) their study revealed that Altman Z-score affect the financial strength of companies.

Effect of penetration ratio on ROE

Penetration ratio indicates the level of development of insurance sector in a country. Penetration ratio is measured as the ratio of premium underwritten in a particular year to the GDP. The rate of insurance penetration determines the acceptability or otherwise of insurance product in that area. Adeyeye, (2020) observed that insurance industry in Nigeria has low penetration because of the poor image they have in the country. This study intends to use penetration ratio to measure the growth of insurance firms in Nigeria, the proxy chosen for growth is ROE. This is in line with the works of Ekinci (2016), Ćurak, Pepur and Poposki (2011), Sackitey (2016) and Shiu (2004) even though, the independent variables used against ROE differs. The study of Okonkwo & Eche (2019) revealed that insurance penetration affects growth of insurance firms.

Gross claims premium and ROE

Claim is the compensation given to a person that purchase insurance cover. The settlement is done when damage occurs and after verifying the extent of the damage by the insurer. The management of claims determine the public image of the firm and the reputation of a firm determine it patronage. Various authors have used claim to determine the growth of insurance firms, the outcome of their study differs; scholars like Etele (2019) asserts that claim affect the growth of insurance firms while the studies of Salaudeen and Mudashiru (2021) and Momudu, Ezirim and Olaletan (2015) revealed contrary result.

Underpinning theory: Balance Theory

The theory used to underpin this study is 'the balance theory.' The theory state that organizations are aware of their surroundings as well as the events that takes place in their environment through a process of perception. The theory assert that environment affect organizations and the organizations also cause changes in the environment. The environment is divided into two; external environment and internal environment. The variables in either of the environment can determine the success or failure of the organization(s). Firm specific variables are variables that are internal to insurance firms. The theory is chosen as underpinning theory because it captured both the independent and dependent variables.

2. EMPIRICAL REVIEWS

To give this study a good backing, the following literatures were reviewed base on the variables for this study: Foo and Pathak (2019) examined corporate performance and Altman Z-Scores in Indian manufacturing firms from 2013 to 2017. ROE is the dependent variable while Altman Z-score is the independent variable. The analysis of the result revealed that there is a positive and significant relationship between performance and Altman Z-Scores in Indian manufacturing firms for the period under consideration. Almamy, Aston and Ngwa (2016) investigated the evaluation of Altman's Z-score using cash flow ratio to predict corporate failure amid the recent financial crisis in UK companies from 2000-2013. The researchers added cash flow to Altman Z-score in order to determine the financial strength of firms in UK. The study revealed the combination of cash flow and Altman Z-score can predict the financial well-being of companies to a higher degree. Aziz and Dar (2006) appraised 89 studies on the prediction of bankruptcy from 1968 to 2003, they discovered that the mostly used multi-variable models is the Z-Score model.

Mwangi and Iraya (2014) studied the determinants of financial performance of general insurance underwriters in Kenya. The independent variables are growth of premium, investment yield, size of insurer, loss ratio, earning asset and expense ratio while return on asset is the dependent variable. Using multiple linear regression to analyze the data obtained from 2010-2012, the study revealed that investment yield and earning assets are positively related to the financial performance of general insurance companies in Kenya while growth of premiums, size of insurer and retention ratio are not significantly related to the ROA of insurance companies in Kenya.

In a related study, Kaya (2015) investigated the effect of firm-specific factors on the profitability of non-Life insurance companies in Turkey. The data were collected from 24 non-life insurance firms in Turkey. Using STATA 12 to analyzed obtained from secondary sources, the study discovered that premium growth is among the firm specific variables that affect the profitability of non-life insurance companies in Turkey. Okonkwo and Eche (2019) investigated insurance penetration rate and economic growth in Nigeria; 1981-2017. The regression of the study revealed that there is no significant relationship between insurance penetration rate and the rate of economic growth in Nigeria.

Etele (2019) examined the insurance sector development and economic growth in Nigeria from 2001-2017. Insurance premium and insurance claims are among the independent variables used in the study proxied by gross domestic products (GDP). The study concluded that insurance premium affects the growth of Nigeria economy unlike insurance claims. The study of Salaudeen, Salam, and Mudashiru, (2021) on the impact of net claim ratio and net retention ratio on the financial performance of insurance companies in Nigeria discovered that insurance claims have significant impact on the financial performance of insurance firms in Nigeria. The study of Momudu, Ezirim, and Olaletan (2015) on insurance intermediation operations and economic growth in Nigeria concluded that insurance premium and insurance claims are insignificant related to the growth of the Nigeria economy even though, they are positive.

3. METHODOLOGY OF THE STUDY

This study adopts the panel research design, the design is adopted because the study collected data from different population and at different point in time. Panel design will explain the influence of the independent variables on the dependent variable. Simple and multiple regression was used to analyzed the data used for the study via the use of STATA 13. The independent variables are insurance penetration ratio, insurance claims and insurance premium while the dependent variable is return on equity (ROE). The researchers used data obtained from the 26 insurance firms listed on Nigeria Stock Exchange. The study is for a ten-year period; 2011-2020.

Model Specification:

This study adopts the model of Gonji, Pam, Msughter and Pam (2020), Gonji, Ahan, Zamdayu and Pam, (2020) and Momudu, Ezirim and Olaletan (2015) because of its ability to vividly address the issue under consideration. The only adjustment made in the model is in the variables used for this study. The variables are stated in the equation below:

$$\text{ROEit} = \beta_0 it + \beta_1 \text{IPR}it + \beta_2 \text{GCP}it + \beta_3 \text{AZS}it + \varepsilon it$$

Where, Return on Equity (ROE) is the proxy for growth, β_0 = constant, $\beta_1 \dots \beta_3$ = the slope which represents the degree in which growth changes as the independent variable change by one unit variable. IPR= Insurance Penetration Ratio, ICP = Insurance Claim Premium, AZS= Altman Z-Score, ε = error term, t = measure of time, i = number of insurance firm observation.

4. DATA PRESENTATION AND ANALYSIS

This section present result of data analysis as follows:

4.1. Descriptive Statistics

The mean, standard deviation, minimum and maximum for the dependent and independent variables of the model are presented in the table below:

Table 4.1: Descriptive Statistics

Variable	Obs.	Mean	Std. Dev.	Min	Max
PR	220	6.767021	.4315783	5.5587	7.8754

GCP	220	16869.61	53568.66	8.04	372358.4
AZS	220	2.005427	.8241565	-.5824	6.8321
ROE	220	-.1240227	11.77458	-92.42	15.8

Note; PR is Penetration Ratio, GCP is Gross Claim Premium, AZS is Altman Z-Score and ROE is Return on Investment

Table 4.1 shows the detail accounts of the descriptive statistics for the dependent and independent variables. The mean of penetration ratio is 6.7% and a standard deviation is 4%. This means that insurance firm under the period of study has penetration ratio of 6.7%. The minimum and maximum value is 5.5 and 7.8 respectively. Gross claim premium which is an independent variable has a mean value 168696% and a standard deviation 535686%. This means that insurance firm in Nigeria under the period of study, 2011-2020 has Gross claim premium of 168696%. The minimum and maximum value are 8.04 and 372358 respectively.

The mean of Altman Z-Score is 20% and a standard deviation is 8%, this means that insurance firms under the period of study has an Altman Z-Score of 20%. The minimum and maximum value is -0.58 and 6.83 respectively. Return on investment which is also an independent variable has a mean value -1% and a standard deviation 11.7% which implies that insurance firms in Nigeria under the period, 2011-2020 has a return on investment of -1%. The minimum and maximum value is -92.42 and 15.8 respectively.

4.2. Correlation Test

Table 4.2: Correlation Table

	PR	GCP	AZS	ROE
PR	1.0000			
GCP	0.2142 0.0014	1.0000		
AZS	0.0043 0.9722	0.0552 0.4156	1.0000	
ROE	0.0043 0.9497	0.0709 0.2952	0.1048 0.1211	1.0000

Note; PR is Penetration Ratio, GCP is Gross Claim Premium, AZS is Altman Z-Score and ROE is Return on Investment

In Table 4.2, penetration ratio has a positive relationship between gross claim premium, atman Z-score and return on equity. Gross claim premium has a positive relationship between atman Z-score and return on equity.

4.3. Multicollinearity

Table 4.3: Multicollinearity Test

Variable	VIF	1/VIF
ROE	1.02	0.984762
AZS	1.01	0.986723
GCP	1.01	0.992672

Note; PR is Penetration Ratio, GCP is Gross Claim Premium, AZS is Altman Z-Score and ROE is Return on Investment

The tolerance value and the variance inflation factor (VIF) are two advanced measures of assessing multicollinearity between the explanatory variables. The variance inflation factor and tolerance are computed using STATA and were found to be consistently smaller than ten (10) and one (1) respectively, indicating absence of multicollinearity. This shows the appropriateness of fitting the study model with three (3) independent variables.

4.4. Hausman Test

Table 4.4: Hausman Fixed Random Effect

Test	Statistics	P Value
Hausman	15.86	0.00

Table 4.4 shows the result of Hausman fixed random test. The result indicates that the chi-square value was high at 15.86 with p-values of 0.00 less than 0.05% level of significant. The result obtained from the Hausman specification test indicates that p value is less than 0.05 and as such fixed effect model is use in favor of the random effect models.

4.5. Regression Result

Table 4.5: Fixed Effect Regression Model

Hypotheses	Coef.	Std. Err.	t	P> t
GCP -> ROE	1.75e-06	5.34e-07	3.27	0.001
AZS -> ROE	.0285623	.0361928	0.79	0.431
IPR-> ROE	-.0002619	.0024798	-0.11	0.916
R Square	0.33			
F Stat	3.87			
P value	0.01			

Note; IPR is Penetration Ratio, GCP is Gross Claim Premium, AZS is Altman Z-Score and ROE is Return on Investment

Gross insurance claim has a positive and significant effect on ROE of insurance firm in Nigeria. This is evidenced from the positive coefficient value of 1.75 with the p-value of 0.00 less than 0.1% significance level. This implies that for every unit increase in gross claim premium, ROE will increase at 17%. Therefore, the null hypothesis is rejected, these findings negate the findings of Etele (2019) and Momudu, Ezirim and Olaletan (2015).

Altman Z-Score has positive and insignificant effect on ROE of insurance firms in Nigeria. This is evidenced from the positive coefficient value of 0.02 with the p-value of 0.43 greater than 0.1% significance level. This shows that for every unit increase in the Altman Z-Score, ROE will increase by 0.2%. Therefore, the null hypothesis is accepted which negate the findings of Almany, Aston and Ngwa (2016) and Foo and Pathak (2019).

Insurance penetration ratio has a negative and insignificant effect on ROE of insurance firms in Nigeria. This is evidenced from a negative coefficient value of -0.00 with the p-value of 0.91 greater than 0.1% significance level. This shows that for every unit increase insurance penetration ratio, ROE will decrease by 0%. Therefore, the null hypothesis is accepted, this contradicts the findings of Okonkwo and Eche (2019).

The R² of the estimated model shows about 0.33 or 33% of the variation in ROE firm in Nigeria. ROE is explained by the combined effects of the predictor (Gross Claim Premium, Altman Z-Score and insurance penetration ratio) while the remaining 67% is attributed to the unexplained variation that the variables the variables did not capture in this model.

The F-statistic of 3.87 is significant at less than 1 percent level, as the p-value estimate of 0.01 has indicated. The F-statistics shows that the explanatory variables are jointly significant in explaining ROE. It shows that there is a linear relationship between the dependent variable and at least one of the independent variables.

5. CONCLUSION

This study examined firms' specific factors and the growth of insurance firms in Nigeria, it used secondary data obtained from the insurance firms quoted on Nigerian stock exchange from 2011-2020. STATA was used to analyzed the data. Out of the three (3) independent variables used for the study, the study discovered that only gross claim premium affects the growth of insurance firms within the period under consideration.

Recommendation

The study recommend that insurance firms should improve on their claim management in order to enhance their growth.

Suggestion for Further Studies

The study used only three independent variables against one dependent variable. Further studies may decide to add more variables to the three independent variables or they may decide to used other firms' specific variables or variables that are not internal to insurance firms.

Funding

This study has not received any external funding.

Conflicts of interests

The authors declare that there are no conflicts of interests.

Data and materials availability

All data associated with this study are present in the paper.

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